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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
HO, CHUONG T	
ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/589,038	MO ET AL.	
	Examiner	Art Unit	
	CHUONG T. HO	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-10,19 and 22-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-10,19,22-24 and 26-29* is/are rejected.

7)☒ Claim(s) *25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Amendment filed 04/29/05 have been entered and made of record.

2. Applicant's amendment filed 04/29/05 with respect to claims 1, 5-10, 19, 22-29 have been considered but are moot in view of the new ground(s) of rejection.

3. Claims 1, 5-10, 19, 22-29 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 5-7, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (U.S.Patent No. 5,442,623) in view of Chang et al. (U.S.Patent No. 6,226,111 B1).

In the claim 1, Wu discloses generating a first protection path (551) for connectionless signals from each of the nodes (each nodes 510, 520, 530, see col. 11, lines 39-40) to a destination node (each nodes 510, 520, 530) (see figure 11, col. 11, lines 25-30, lines 47-55); comprising:

- generating a second protection path from each of the nodes to the destination node, the second protection path (552, figure 11) distinct from the first protection path (551, figure 11) such that the first (551) and second protection paths (552)

do not have any common nodes or links (see figure 11, col. 11, lines 25-30, lines 47-55);

- routing protection traffic along one of the protection paths (551, 552) to the destination node (each nodes 510, 520, 530).

However, Wu is silent to disclosing wherein generating the first protection path and generating the second protection path each comprise decomposing the telecommunications network into a ring and at least one ear.

See figure 12, Chang et al. discloses generating the first protection path 98.1 and generating the second protection path (100.1) each comprise decomposing the telecommunications network into a ring and at least one ear ((90.1, 90.2) (see col. 13, lines 65-67, col. 14, lines 1-15).

Both Wu, and Chang discloses the first protection path and the second protection path which do not have any common links. Chang recognizes generating the first protection path 98.1 and generating the second protection path (100.1) each comprise decomposing the telecommunications network into a ring and at least one ear ((90.1, 90.2) (see col. 13, lines 65-67, col. 14, lines 1-15). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Wu with the teaching of Chang to provide the first protection path and generating the second protection path each comprise decomposing the telecommunications network into a ring and at least one ear in order to increase network efficiency.

5. In the claim 19, Wu discloses generating a first protection path (551) for connectionless signals from each of the nodes (each nodes 510, 520, 530, see col. 11,

lines 39-40) to a destination node (each nodes 510, 520, 530) (see figure 11, col. 11, lines 25-30, lines 47-55); comprising:

- generating a second protection path from each of the nodes to the destination node, the second protection path (552, figure 11) distinct from the first protection path (551, figure 11) such that the first (551) and second protection paths (552) do not have any common nodes or links (see figure 11, col. 11, lines 25-30, lines 47-55);
- each of the nodes operable to transmit protection traffic for the destination node (each nodes 510, 520, 530) along the first protection traffic (551) and along the second protection path (552) (see figure 1, col. 11, lines 25-30, lines 47-55).

However, Wu is silent to disclosing wherein generating the first protection path and generating the second protection path each comprise decomposing the telecommunications network into a ring and at least one ear.

See figure 12, Chang et al. discloses generating the first protection path 98.1 and generating the second protection path (100.1) each comprise decomposing the telecommunications network into a ring and at least one ear ((90.1, 90.2) (see col. 13, lines 65-67, col. 14, lines 1-15).

Both Wu, and Chang discloses the first protection path and the second protection path which do not have any common links. Chang recognizes generating the first protection path 98.1 and generating the second protection path (100.1) each comprise decomposing the telecommunications network into a ring and at least one ear ((90.1, 90.2) (see col. 13, lines 65-67, col. 14, lines 1-15). Thus, it would have been obvious to

one of ordinary skill in the art at the time of the invention to modify the system of Wu with the teaching of Chang to provide the first protection path and generating the second protection path each comprise decomposing the telecommunications network into a ring and at least one ear in order to increase network efficiency.

6. In the claim 5, Chang discloses decomposing the telecommunications network further comprising charting the ring horizontally beginning with the destination and ending with destination node (see col. 13, lines 65-67, col. 14, lines 1-15).

9. In the claim 6, Chang discloses decomposing the telecommunications network further comprising ordering the ears and charting the ears horizontally based on the order of the ears (see col. 13, lines 65-67, col. 14, lines 1-15).

10. In the claim 7, Chang discloses generating the first protection path further comprising generating the first protection path in a first direction based on the charted ring and ears and generating the second protection path further comprising generating the second protection path in a second direction based on the charted ring and ears (see col. 13, lines 65-67, col. 14, lines 1-15).

1. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Wu – Chang) in view of Hillard et al. (U.S.Patent No. 6,765,880 B1). In the claim 8, the combined system (Wu – Chang) discloses the limitations of claim 1 above.

However, the combined system is silent to disclosing classifying received traffic as working traffic or protection traffic.

Hillard discloses classifying received traffic as working traffic or protection traffic (see col. 9, lines 49-55).

Both Wu, Chang, and Hillard discloses the protection path. Hillard recognizes classifying received traffic as working traffic or protection traffic. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Wu – Chang) with the teaching of Hillard to classify received traffic as working traffic or protection traffic in order to improve the network more efficiency

11. In the claim 9, Hillard et al. discloses routing protection traffic further comprising routing along the first protection path the protection traffic received on the first protection path and routing along the second protection path the protection traffic received on the second protection path (see col. 9, lines 49-55).

2. In the claim 10, Hillard et al. discloses determining which of the first and second protection paths to the destination node comprises a shorter path; and routing received working traffic as protection traffic onto the protection path comprising the shorter path (see col. 9, lines 57-59).

16. Claims 22-24, 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Wu-Chang) in view of Au (U.S.Patent No. 6,473,397 B1).

In the claim 22, the combined system (Wu - Chang) discloses the limitations of claim 19 above.

However, the combined system (Wu - Chang) is silent to disclosing each of nodes comprising at least two ports, each port operable to receive and transmit traffic

for the node and a protection egress port identifier operable to identify one of the port as a protection egress port for a specified ingress port and a specified destination node, the protection egress port operable to transmit protection traffic received at the specified ingress port for the specified destination node.

Au discloses, see figure 3, STU-VCI mapping 51 identifying the VCIs associated with all its STUs. The ATM switch has a full-duplex STU port 49 for each STU52 (see col. 5, lines 37-38); comprising:

- each of nodes (A, B, C, D, E) comprising at least two ports, each port operable to receive and transmit traffic for the node and a protection egress port identifier operable to identify one of the ports as a protection egress port for a specified ingress port and a specified destination node, the protection egress port operable to transmit protection traffic received at the specified ingress port for the specified destination node (see figure 3, col. 7, lines 25-30, col. 5, lines 1-67, col. 6, lines 1-67, col. 7, lines 1-10).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined system (Wu - Chang) with the teaching of Au to provide at least two ports (each of nodes), each port operable to receive and transmit traffic for the node in order to identify one of the ports as a protection egress port for a specified ingress port and a specified destination node, the protection egress port operable to transmit protection traffic received at the specified ingress port for the specified destination node. Therefore, the combined system would have been enable

the node to be re-routed the traffic to another available egress protection port (a failure occurs on the working egress port).

17. In the claim 23, Au discloses each of the nodes further comprising an egress port evaluator operable to evaluate a status for each of the nodes (see col. 9, lines 20-25).

18. In the claim 24, Au discloses each of the nodes further comprising an egress port selector operable to select an egress port for transmitting traffic for the node (see col. 7, lines 5-7, lines 25-30).

19. In the claim 26, Au discloses each of the nodes further comprising a working traffic egress port identifier (see figure 3) operable to identify one of the ports as a working traffic egress port for a specified ingress port and a specified destination node, the working traffic egress port operable to transmit working traffic received at the specified ingress port for the specified destination node (see figure 3, col. 7, lines 25-30, col. 5, lines 1-67, col. 6, lines 1-67, col. 7, lines 1-10).

20. In the claim 27, Au discloses each of nodes further comprising a secondary protection egress port identifier operable to identify one of the ports as a secondary protection egress port for a specified destination node, the secondary protection egress port operable to transmit as protection traffic the working traffic received at the node for the specified destination node (see figure 3, col. 7, lines 25-30, col. 5, lines 1-67, col. 6, lines 1-67, col. 7, lines 1-10).

21. In the claim 28, Nishikawa et al. discloses each of the nodes further comprising a traffic classifier operable to classify received traffic as working traffic or protection traffic (see col. 6, lines 50-55).

22. In the claim 29, Au discloses the egress port selector operable to select an egress port for transmitting traffic for the node based on the classification of the received traffic as working traffic or protection traffic and based on the status of the egress ports (see figure 3, col. 7, lines 25-30, col. 5, lines 1-67, col. 6, lines 1-67, col. 7, lines 1-10).

Allowable Subject Matter

23. Claim 25 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T HO whose telephone number is (571) 272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

07/11/05

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